

REMARKS

Claims 1-37 and 45 were previously pending in this application. By this amendment, claim 8 is cancelled without prejudice or disclaimer. Claims 1, 9, 16, 18, 19, 25, 30, 33 and 37 have been amended. New claims 46-49 have been added. As a result claims 1-7, 9-37 and 45-49 are pending for examination with claims 1, 25, 30, 37 and 45-49 being independent claims. Subject matter recited in newly added independent claim 46 is disclosed in the specification on, for example, pages 35-37 and in figures 5b-5f. In several of the claims, the term “air” has been replaced with “gas” to emphasize that reference to “air lance” or “air embossing” in the claims encompasses the use of gases other than air, as explained in the specification on page 10, lines 7-9. No new matter has been added.

Rejections Under 35 U.S.C. §112, First Paragraph

Claims 30-36 were rejected under 35 U.S.C. §112, first paragraph as failing to comply with the enablement requirement. Specifically, the Office Action stated that the recitation of “at least a portion of the stencil stabilizer extends, when the stabilizer is not in contact with the inner surface, to a location separated from the longitudinal central axis of the conduit by a first, said first distance exceeding a second distance separating the nozzle from the longitudinal central axis of the conduit” was not described in the specification nor illustrated in the drawings.

First, it is noted that the above-quoted description of the configuration of certain stencil stabilizer configurations is supported throughout the specification and is explicitly illustrated in figures 5c, 6a—d, 6f, 7a, 7b, 7e, 8a-8c, and 8e. For example, referring to the embodiment illustrated in Fig. 8e, when the stencil stabilizer 900 is not in contact with the inner surface of a stencil – as is the case in the figure where the air lance is shown removed from the stencil – it extends from longitudinal central axis 320 by a distance exceeding the distance separating nozzle 216 from the longitudinal central axis 320 of the conduit.

Nevertheless, to clarify the recited structure and make the claim language more readily understood by the reader, independent claim 30 has been amended, in a non-narrowing fashion, to clarify the relative separation of the nozzle and the portion of the stencil stabilizer with respect to the longitudinal central axis of the conduit under at least certain conditions (e.g. whenever a stabilizer is not compressed towards the conduit sufficiently such that the recited geometric

relationship no longer applies). Accordingly, withdrawal of the rejections of claim 30 and dependent claims 31-36 are respectfully requested.

Rejections Under 35 U.S.C. §102

Claims 1-19, 25-29, 37 and 45 have been rejected under 35 U.S.C. §102(b) as being anticipated by Mitter (U.S. Pat. No. 4,497,249).

Regarding claim 1, Mitter nowhere appears to disclose or suggest that his system is configured for air embossing a surface of an embossable fabric, as recited in claim 1. Rather, the Mitter system appears to be specifically configured for applying a fluent liquid material to a substrate.

Furthermore, Mitter certainly does not appear to disclose or suggest that his system includes an air lance comprising at least one nozzle, wherein the nozzle is configured and positioned with respect to the inside surface of a stencil so that it is able to emit a stream of a gas supplied to the air lance such that the gas is directed to pass through openings in the stencil and, when the system is in operation, impinge upon the surface of the embossable fabric with sufficient velocity and collimation to create visible embossed depressions in the surface of the fabric in a pattern corresponding to a pattern of the openings in the stencil, as recited in claim 1 as amended.

While Mitter does possibly suggest the discharge of media such as air or gas from a nozzle of certain of his devices (see description of FIG. 11 and FIG. 12 embodiment at column 10, lines 32-50), the air or gas appears to be utilized either for forming a foamed liquid treating medium, which passes through the stencil and onto the substrate being treated, or for the pressurization of a flowable printing medium such as liquid ink or paste ink, which passes through the stencil and onto the substrate being treated. Nowhere does it appear that Mitter suggests that any of his systems are configured such that any gas that can be emitted from any nozzle of any of his devices so as to pass through the stencil so that it impinges on the surface of an embossable fabric, as recited in amended claim 1.

Nevertheless, assuming for the sake of argument only, that Mitter did disclose a system configured so that it was able to directly discharge air or gas so that it could pass through the stencil, it is readily apparent in FIG. 12 that any structure potentially satisfying the definition of a

nozzle given in the instant specification on page 10, lines 28-29 [e.g. opening of conduits (55) into the interior (206)] is not configured or positioned with respect to the inner surface of the stencil so as to be able to emit a stream of gas that has sufficient velocity to create visible embossed depressions in the surface of the fabric. Rather, the nozzles are widely spaced apart and separated from the stencil by a distance that appears to equal or exceed the radius of the stencil. Such a configuration, as would be understood by those skilled in the art, would create poor collimation and uniformity. In the embodiment of FIG. 11, it appears that the air or gas is used to pressurize distensible hoses (33) and is not emitted from any nozzles at all. Accordingly, it is believed that the rejection of independent claim 1 on the present basis has been overcome, and withdrawal of the rejections of claim 1 and dependent claims 2-7 and 9-19 is respectfully requested.

Independent claim 25, as amended, similarly to independent claim 1, recites that the system is a system for air embossing a surface of an embossable fabric and that it includes an air lance comprising at least one nozzle, wherein the nozzle is constructed and positioned with respect to an inner surface of a stencil so that it is able to emit a stream of a gas through openings in the stencil and onto the embossable surface of the fabric with sufficient velocity and collimation to create a pattern of visible embossed depressions in the surface of the fabric corresponding to a pattern of the openings in the stencil. As shown above in the discussion of claim 1, Mitter does not appear to teach or suggest such a system. Furthermore, none of the disclosed embodiments appear to have a nozzle that is positioned to contact the inner surface of the stencil. Accordingly, the withdrawal of the rejections of claim 25 and dependent claims 26-29 is respectfully requested.

Regarding independent claim 37, as amended, nowhere does it appear that Mitter discloses or suggests any means for air embossing an embossable fabric by directing a stream of a gas through at least one opening in a rotating cylindrical stencil and onto an embossable surface of a fabric, that is identical or equivalent to the structure identified in the instant specification for performing this function. The structure corresponding to the recited means for air embossing disclosed in the present application comprises an air lance having a nozzle configured and positioned so that it is located with respect to the inner surface of a cylindrical stencil and configured so as to emit a stream of gas and direct the stream of gas through the at

least one opening in the stencil with sufficient collimation and velocity to create a at least one visible embossed depressions in the surface of the fabric corresponding to the at least one opening in the stencil. As discussed above in the context of the rejection of independent claims 1 and 25, Mitter does not disclose or suggest such structure. Accordingly, withdrawal of the rejection of claim 37 is respectfully requested.

Claim 45, as amended, recites a means for directing air from within a cylindrical stencil, through openings in the cylindrical stencil, and towards an embossable surface of an embossable fabric with sufficient collimation and velocity to emboss the fabric with visible embossed depressions in a pattern corresponding to a pattern of the plurality of openings formed in the stencil. As discussed above in the context of claim 37, nowhere does it appear that Mitter discloses or suggests any structure identical or equivalent to the structure disclosed in the present specification corresponding to such a function. Accordingly, it is believed that the present rejection of independent claim 45 has been overcome, and withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. §103

Claims 20-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mitter. Claims 20-24 depend indirectly from independent claim 1. For at least the reasons discussed above regarding claim 1, claims 20-24 are believed to be in condition for allowance, and withdrawal of the rejections of claims 20-24 is respectfully requested.

New Claims

Newly added claim 46 is directed to, among other limitations, at least one stencil stabilizer constructed and positioned to apply a force to the stencil during operation of the system so as to distort the cross-sectional shape of the stencil into a non-circular shape and to maintain said non-circular shape during rotation of the stencil. The deformation-preventing means disclosed in Mitter is not disclosed to distort the cross-sectional shape of the stencil into a non-circular shape and maintain the non-circular shape during rotation of the stencil because it is specifically intended to maintain the cylindrical roundness of the stencil. For example, in Column 1, lines 62-65, Mitter states, "Still more specifically, it is an object of the invention to

provide a screen of the type under discussion which is provided with means for preventing the screen from being deformed out of its cylindrical roundness.” Mitter goes on to state, “All that counts, in accordance with the invention, is that the pressure acting upon the screen and tending to deform it out-of-round, irrespective of whether this pressure is exerted by the medium pool and/or by the applicator device, be prevented from effecting such out-of-round deformation of the screen.” (Column 3, lines 10-16). Accordingly, new claim 46 is believed to patentably distinguish Mitter.

Newly added claim 47 corresponds to originally filed dependent claim 4 rewritten in independent form. Claim 47 recites, among other limitations, that the at least one stencil stabilizer is constructed and positioned so that at least a portion thereof is in essentially continuous contact with a surface of the stencil during the entirety of its rotation. The deformation preventing means disclosed in Mitter is not disclosed as being in essentially continuous contact with a surface of the stencil. By contrast, according to the disclosure of Mitter, “In FIGS. 1-7, for example, [the deformation preventing means] is in the form of a stationary tube or pipe 2’ the outer circumferential surface of which conforms in its shape to the inner surface of the screen 1, with which it is juxtaposed *with just sufficient clearance* so as not to undergo frictionally induced destruction during rotation of the screen.” (Column 4, lines 42-48, emphasis added). The presence of a clearance between the deformation preventing means and the inner surface of the screen indicates that they are not intended to or configured to be in essentially continuous contact. Accordingly, claim 47 is believed to be in allowable condition.

Newly added claim 48 is directed to a system comprising, among other limitations, a stream of gas emitted from at least one nozzle, passing through openings in a stencil, the stream of gas being directed so as to impinge upon a surface of an embossable fabric with sufficient velocity to create visible embossed depressions in the surface of the fabric in a pattern corresponding to a pattern of the stencil openings. Mitter neither discloses nor suggests such a limitation. Accordingly, claim 48 is believed to be in allowable condition.

Newly added claim 49 recites, among other limitations, like claim 48, a stream of gas emitted from at least one nozzle, passing through openings in a stencil, the stream of gas being directed so as to impinge upon a surface of an embossable fabric with sufficient velocity to create visible embossed depressions in the surface of the fabric in a pattern corresponding to a

pattern of the stencil openings. Mitter neither discloses nor suggests such a limitation.

Furthermore, claim 49 also recites that the nozzle is positioned so that at least a portion thereof is in contact with the inner surface of the stencil when the system is in operation. As discussed above, such a limitation does not appear to be taught or suggested by Mitter. Accordingly, claim 49 is believed to be in condition for allowance.

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CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the agent at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, any necessary extension of time is hereby requested. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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